



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,468	08/24/2005	Naohiko Uchiumi	264532US0PCT	2239
22850	7590	08/07/2008		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER THEODORE, MAGALI P	
			ART UNIT	PAPER NUMBER
			1791	
			NOTIFICATION DATE	DELIVERY MODE
			08/07/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/521,468	Applicant(s) UCHIUMI ET AL.	
	Examiner Magali P. Théodore	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 17-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>18 January 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restrictions

1. Applicant's election with traverse of group I, claims 1-16, in the reply filed on June 5, 2008 is acknowledged.

The traversal is on the grounds that the examiner did not establish a serious burden of search or patentable distinction as required by MPEP 803. This is not found persuasive because MPEP 803 applies only to domestic applications and not to applications filed under 35 U.S.C. 371.

Applicant further argued that the examiner did not "provide any indication that the content of the claims [had been] *interpreted in light of the description*." This is not found persuasive because, at all stages of all U.S. applications, the examiner is required to apply to the claims their broadest reasonable interpretation without importing limitations from the description or drawings. "Limitations appearing in the specification but not recited in the claim should not be read into the claim. *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted 'in view of the specification' without importing limitations from the specification into the claims unnecessarily)" (MPEP 2106 II C).

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 17-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on June 5, 2008.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 8-13 and 16 rejected under 35 U.S.C. 102(b) as being anticipated by Ninomiya et al. (EP 1,085,028 A1), henceforth “Ninomiya.”

Regarding claim 1 step 1, Ninomiya discloses a process for making ethyl vinyl alcohol copolymer pellets beginning with an ethylene vinyl alcohol (EVOH) solution (p 4 In 26) containing methanol (p 3 In 55-57), an alcohol whose boiling point is less than 100 C. Ninomiya discloses a solution that is 20 % to 55 % EVOH (p 5 In 13-14) in an aqueous solvent that is 20 % to 95 % alcohol (p 5 In 10-11). With a solvent that is 95 % alcohol and a solution which is between 20 % and 55 % EVOH, the solution has between 43 and 76 parts alcohol per 100 parts EVOH. The upper end of this range meets the 50 part minimum recited by the claim. Ninomiya discloses placing said EVOH solution into an apparatus, contacting the solution with water in said apparatus to let out said alcohol with water (p 5 In 27-29) and then letting out from said apparatus an EVOH copolymer hydrous composition containing as little as 5 % water and no alcohol (p 7 In 14-15), meeting the requirements set by the claim that the hydrous copolymer contain 10 to 1000 parts water and 0 to 10 parts alcohol.

Regarding claim 1 step 2, Ninomiya discloses cutting the EVOH copolymer hydrous composition from step 1 to obtain EVOH copolymer hydrous composition pellets (p 5 ln 56-57).

Regarding claim 1 step 3, Ninomiya discloses introducing the EVOH copolymer hydrous composition pellets from step 2 into a dryer to reduce a water content of the pellets (p 7 ln 3-4).

Regarding claim 1 step 4, Ninomiya discloses melt-kneading the pellets from step 3, in an extruder (p 7 ln 15-16).

Regarding claim 1 step 5, Ninomiya discloses cutting the EVOH to obtain the pellet of EVOH (p 7 ln 26).

Regarding claim 2, Ninomiya discloses that ethylene content of said EVOH copolymer between 3 and 70 mol % (p 3 ln 32) and its degree of saponification exceeds 80 mol % (p 5 ln 2).

Regarding claim 3, Ninomiya discloses that said alcohol is methanol (p 4 ln 1).

Regarding claim 8, Ninomiya discloses immersing the pellets from step 2 in a washing liquid to remove a saponification catalyst residue (p 6 ln 9-11) before step 3.

Regarding claim 9, Ninomiya discloses immersing the pellets from step 2 in an aqueous solution containing at least one of carboxylic acid (acetic acid), boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt to add said additive to the pellets (p 10 paragraph 0045, especially ln 19) before step 3.

Regarding claim 10, Ninomiya discloses that the drying temperature is between 40 °C and 150 °C (p 7 ln 3-4).

Regarding claim 11, Ninomiya discloses reducing the pellets' water content to 10 weight % or less in step 3 (p 7 ln 14).

Regarding claim 12, Ninomiya discloses that the water weight of the EVOH copolymer after melt-kneading is less than 1 % (p9 ln 39-41).

Regarding claim 13, Ninomiya discloses that water is removed from molten resin in said extruder in step 4 (p 7 ln 14-16).

Regarding claim 16, Ninomiya discloses cutting the EVOH copolymer in step 5 after cooling (p 12 ln 36).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 1791

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ninomiya in as applied to claim 1 above and further in view of Yamauchi et al. (US 5,302,417), henceforth "Yamauchi."

Regarding claims 4, Ninomiya discloses introducing the EVOH copolymer solution into to a tower type vessel (saponification column, p 12 ln 12) and contacting the solution with water in said vessel to let out said alcohol with water (p 5 ln 27-29). Ninomiya does not specify that the water is vapor. However, Yamauchi teaches introducing the EVOH copolymer solution into to a tower type vessel and contacting the solution with water vapor in said vessel to let out said alcohol with water (col 21 ln 28-38). Steam is used so that the water might mix with the methanol vapor (col 21 ln 30) to change the solvent composition (col 21 ln 34). Therefore it would have been obvious to an ordinary artisan to use water vapor in the method taught by Ninomiya because Yamauchi teaches using steam add water to the vaporous methanol solvent.

Regarding claim 5, Ninomiya teaches conducting the reaction continuously (p 4 ln 48-49).

9. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ninomiya as applied to claim 1 above and further in view of Kawahara et al. (EP 1,179,546), henceforth "Kawahara 546."

Ninomiya discloses continuously (p 4 ln 48-49) (introducing the EVOH copolymer solution into to a tower type vessel (saponification column, p 12 ln 12) and contacting the solution with water in said vessel to let out said alcohol with water (p 5 ln 27-29). Ninomiya does not discuss flow paths or specify that the water is vapor. However, Kawahara 546 teaches continuously introducing the EVOH copolymer solution from an upper part of the tower type vessel, introducing water vapor from a lower part of the tower such that the two fluids come into contact and then thereafter letting out said EVOH copolymer hydrous from the lower part of the tower and letting out said alcohol with water vapor from the upper part of the tower for the purpose of purging unreacted reactants from the polymer solution (col 6 ln 1-13). Therefore, it would have been obvious to an ordinary artisan to incorporate into the method taught by Ninomiya the water vapor and flow paths taught by Kawahara 546 because Kawahara 546 teaches using these to purge unreacted reactants from the polymer solution.

10. Claims 7 and 14-15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ninomiya as applied to claim 1 above and further in view of Kawahara et al. (EP 1,072,616), henceforth "Kawahara 616."

Regarding claim 7, Ninomiya does not teach cutting the EVOH copolymer hydrous composition is cut in a molten state in step 2. However, Kawahara 616 teaches doing so to cut great quantities of polymer quickly and accurately. Therefore it would have been obvious to an ordinary artisan to hot-cut the fresh hydrous EVOH copolymer taught by Ninomiya because Kawahara 616 teaches doing so for increased efficiency, speed and accuracy.

Regarding claim 14-15, Ninomiya discloses that the pellets from step 2 are immersed in an aqueous solution containing at least one of carboxylic acid, boron compound, phosphoric acid compound, alkali metal salt and alkaline earth metal salt to add said additive to the pellets, and then supplied to said dryer of step 3. Ninomiya does not teach adding anything in the extruder at step 4. However, Kawahara 616 teaches adding these at least one of these additives to both the washing liquid and the extruder (paragraph 0026) because it is difficult to get the additive's concentration right when adding it only in the washing step (paragraph 0064 In 42-45). Therefore it would have been obvious to an ordinary artisan to add the additive(s) in the extruder disclosed by Ninomiya because Kawahara 616 teaches doing so for better control of the additive's concentration.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magali P. Théodore whose telephone number is (571)

270-3960. The examiner can normally be reached on Monday through Friday 9:00 a.m. to 5:30 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Magali P. Théodore/
Examiner, Art Unit 1791

/Christina Johnson/

Supervisory Patent Examiner, Art Unit 1791

Application/Control Number: 10/521,468
Art Unit: 1791

Page 10